

Ecopedagogy and Emotional Intelligence in Teacher Education: Pathways to Cooperative and Reflective Learning

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ABSTRACT

Teacher education today requires the integration of pedagogical, socioemotional, and environmental dimensions in order to respond to complex and constantly changing contexts. To support this discussion, the study adopted a qualitative approach, suitable for conducting an interpretive and contextualized analysis of the topic. The methodological procedure employed was bibliographic research, which made it possible to gather and examine national and international scientific studies related to the subject. The general objective was to investigate the connections among ecopedagogy, emotional intelligence, and cooperative learning, emphasizing the importance of the reflective teacher in contemporary teacher education. It is therefore concluded that the articulation among

ecopedagogy, emotional intelligence, and cooperative learning represents a promising path for the development of critical teachers capable of addressing the challenges of contemporary education.

Keywords: *ecopedagogy; emotional intelligence; cooperative learning; reflective teacher.*

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I. INTRODUCTION

The challenges faced by modern education are increasingly complex and therefore demand from educators not only mastery of subject matter but also the ability to perceive and engage with social, environmental, and emotional issues. In this context, *ecopedagogy* emerges as an approach that integrates sustainable and reflective practices into teacher education, seeking to align educational processes with a critical awareness of global change. At the same time, *emotional intelligence*, by focusing on self-regulation and interpersonal interactions, helps teachers develop socioemotional skills that foster a more harmonious and empathetic learning environment. *Cooperative learning*, in turn, emphasizes the joint construction of knowledge, promoting active student participation and strengthening the role of the reflective teacher.

To support this discussion, the study adopted a qualitative methodology, which allows for a contextualized and interpretive analysis consistent with the formative nature of the research. The chosen method was bibliographic research, as it is the most appropriate for gathering, systematizing, and analyzing existing scientific works on the subject. This approach made it possible to identify points of convergence and divergence among authors and schools of thought while providing a solid theoretical foundation for the proposed analysis.

The general objective of this study was to investigate the connections among ecopedagogy, emotional intelligence, and cooperative learning, emphasizing the importance of the reflective teacher in contemporary teacher education. Additionally, three specific objectives were established: (1) to examine how ecopedagogy can enrich teacher education aimed at sustainable and critical educational practices; (2) to explore the importance of emotional intelligence in developing teachers' socioemotional competencies; and (3) to assess how cooperative learning, combined with the teacher's reflective stance, enhances more inclusive and participatory teaching and learning processes.

Finally, this article is organized into four main sections. The introduction presents the context and goals of the research. The materials and methods section describes the procedures used in the study. The theoretical framework discusses the main themes through three key axes: ecopedagogy, emotional intelligence, and cooperative learning. The final considerations highlight the most significant findings and reflections, pointing to possible paths for strengthening teacher education in the present day.

II. MATERIAL AND METHODS

A qualitative approach was employed in this study, as it enables a contextualized and interpretive analysis of the subject, which is particularly appropriate for the research objectives. This perspective prioritizes the interpretation of the meanings constructed by individuals and allows for a more attentive examination of the relationships among ecopedagogy, emotional intelligence, and cooperative learning. According to Cesário et al. (2020), qualitative research makes it possible to explore phenomena in their complexity and provides a critical understanding that goes beyond the mere collection of quantitative data. Therefore, adopting this approach allowed for a broader interpretation of the interactions among the analyzed concepts.

The investigative procedure used was bibliographic research, as it is the most suitable method for compiling, organizing, and analyzing the diverse scientific contributions already published on the subject. Sousa, Oliveira, and Alves (2021) emphasize that this type of research enables the identification and discussion of theoretical frameworks that support the development of new academic studies. Thus, bibliographic research is not limited to data collection but constitutes a space for dialogue among different authors and contexts, enriching the critical dimension of the analysis.

Both national and international scientific articles addressing the connections among pedagogical practices, socioemotional competencies, and cooperative teaching methodologies were reviewed. This broad scope sought to avoid a narrow perspective and enabled the identification of diverse realities that, despite their differences, share common challenges in teacher education today. The variety of sources made it possible to compare different academic traditions and to understand how the discussions evolve between global and local contexts.

The collection and analysis of material were guided by the relevance of the topic and the currency of the publications. The selection included peer-reviewed texts published in reputable scientific journals recognized by the academic community. This careful selection ensured that the reflections developed throughout the study were grounded in solid, up-to-date contributions that engage with issues increasingly discussed in contemporary educational literature.

III. THEORETICAL FRAMEWORK

3.1 Ecopedagogy and Critical Sustainability in Teacher Education

Gadotti (2001), a disciple of Paulo Freire, explicitly developed ecopedagogy based on Freirean principles. Freire himself emphasized that dialogicity, that is, the horizontal dialogue between educators and learners, serves as the foundation for cooperation in a process where everyone learns from one another. According to Freire (as cited in Gadotti, 2001), the practice of critical reflection on one's own practice is essential in teacher education, as it fosters the development of critical consciousness through continuous questioning of personal practices, ideologies, and positions. He also viewed teaching as a form of ongoing inquiry sustained by epistemological curiosity.

Ecopedagogy is established as an educational perspective that integrates teaching practices with critical sustainability. It departs from purely utilitarian methods and proposes an approach to teaching and learning that connects everyday life to socio-environmental responsibility. For teachers to act as mediators of a planetary consciousness—one that transforms individuals' relationships with their environment—it is essential that this dimension be integrated into teacher education, as highlighted by Costa and Silveira (2017). In this sense, ecopedagogy not only conveys information but also encourages both educators and learners to reflect on their attitudes toward the world.

In the current context, marked by global environmental challenges, teacher education assumes an even more crucial role. According to Misiaszek (2020), ecopedagogy provides critical tools to address issues of planetary justice and sustainable development. From this perspective, teaching should not be limited to the transmission of content but should foster ethical and political attitudes aimed at socio-environmental equity. Thus, the teacher, guided by ecopedagogical principles, takes on the role of an agent who stimulates collective reflection and promotes cooperation in the classroom.

This process also takes shape through formative experiences grounded in personal narratives and life trajectories. Pagani and Aguiar (2020) demonstrate that life narratives within teacher education in environmental contexts create emotional bonds and encourage the adoption of ecological values. When personal experiences intertwine with collective perspectives, teacher education gains practical depth that transcends abstraction. Therefore, critical sustainability emerges not merely as a concept but as a lived and shared practice.

Table 1 – Themes of Ecopedagogy and Critical Sustainability in Teacher Education

Subject	Description	Reference
Planetary consciousness	Integration of educational practices with socio-environmental responsibility	Costa, & Silveira (2017)
Planetary justice and sustainable development	Critical approach aimed at socio-environmental equity	Misiaszek (2020)
Life stories in teacher education	Strategy to connect personal experiences with ecological values	Pagani, & Aguiar (2020)
Earth Charter and planetary citizenship	Guiding principles for ethical and reflective pedagogical practices	Sgnaulin, & Dickmann (2024)

Source: Costa, & Silveira (2017); Misiaszek (2020); Pagani, & Aguiar (2020); Sgnaulin, & Dickmann (2024).

Another aspect that deserves emphasis is the inclusion of international references and guiding documents, such as the Earth Charter. Sgnaulin and Dickmann (2024) assert that this document encompasses ecopedagogical principles that can guide teacher education toward practices committed to planetary citizenship. Integrating these references enhances the teacher's critical perspective and encourages the development of educational practices that link environmental preservation with social justice. Therefore, ecopedagogy is not presented as an autonomous field but as a central component of an ethical and reflective education.

3.2 Emotional Intelligence and the Role of Socioemotional Competencies in Teaching Practice

Emotional intelligence has become a significant topic in discussions on teacher education, as the daily school environment is filled with challenges that require balance, empathy, and emotional regulation. Teachers who possess these competencies are able to establish a more inclusive and collaborative learning climate, promoting student participation and minimizing conflicts. Aldrup et al. (2020) assert that assessing teachers' socioemotional competencies allows for the identification of critical skills, such as managing challenging situations and maintaining constructive classroom interactions.

These competencies do not emerge in isolation but are consolidated through pedagogical practice and engagement with diverse teaching contexts. Emotional regulation and social-educational skills are essential, and Justo and Andretta (2020) emphasize that mastery in these areas can be beneficial both for teachers' well-being and for student engagement. This highlights that pedagogical work extends beyond technical knowledge to

encompass the teacher's capacity to build constructive relationships with students. The recent literature, as illustrated in Table 2, clarifies the main axes of investigation related to this topic.

Table 2 – Themes of Emotional Intelligence and Socioemotional Competencies in Teaching Practice

Topic	Description	Reference
Assessment of socioemotional competencies	Use of instruments to identify teaching skills related to emotional regulation and empathy	Aldrup et al. (2020)
Emotional regulation and social skills	Development of strategies to manage emotions and promote positive interactions	Justo, & Andretta (2020)
Socioemotional in the classroom	Practices that strengthen bonds and promote a cooperative environment	Carneiro, & Lopes (2020)
Initial and continuing teacher education	Integration of socioemotional competencies into the teacher training process	Irala, Ferreira, & Blass (2022)

Source: Aldrup et al. (2020); Carneiro, & Lopes (2020); Irala, Ferreira, & Blass (2022); Justo, & Andretta (2020).

Different levels of teacher education have been examined regarding the systematic incorporation of socio-emotional development strategies. By prioritizing these competencies, Carneiro and Lopes (2020) argue that schools enhance classroom interactions and promote more meaningful teaching. A teacher who cultivates emotional intelligence expands their capacity to listen, values students' diverse experiences, and is able to create an environment of respect and trust. These elements, in addition to improving educators' practice, foster more humanized educational interactions. Both initial and continuing teacher education also provide conducive settings for intentionally developing these competencies.

According to quantitative analyses by Irala, Ferreira, and Blass (2022), practices focused on socio-emotional development are beneficial for pre-service teachers, influencing both their performance and their perception of self-efficacy. Therefore, offering programs that integrate emotional intelligence into the teacher education curriculum is not merely an addition of content but represents a transformation in how teachers carry out their roles and engage with the school and its community.

3.3 Cooperative Learning and the Development of the Reflective Teacher in Contemporary Education

Cooperative learning is considered a promising approach for fostering inclusion and participation in the classroom. Positive interdependence and collaborative work are highly valued, contributing not only to cognitive growth but also to the cultivation of solidarity and active listening. Bello, Capellini, and Ribeiro (2018) argue that this model moves away from competition and allows for more equitable interaction among students, promoting the creation of shared knowledge. Within this context, the reflective teacher acts as a mediator who observes, intervenes when necessary, and encourages student autonomy.

When considering cooperative learning as an educational philosophy, Campos and Gomes (2022) highlight that it helps to reconfigure the roles of teacher and student. Instead of concentrating knowledge in a single voice, the process becomes a web of interactions in which everyone learns and everyone teaches. This approach aligns with the vision of the reflective teacher, who goes beyond the mere application of methodologies and critically analyzes their decisions, adapting their practice based on student feedback. Several studies, as shown in Table 3, emphasize key elements of the relationship between cooperation and reflection.

Table 3 – Themes of Cooperative Learning and the Reflective Teacher in Contemporary Education

Subject	Description	Reference
Cooperation and Inclusion	Overcoming competitive logic and valuing group work	Bello, Capellini, & Ribeiro (2018)
Educational Philosophy of Cooperation	Redefinition of roles between teacher and students	Campos & Gomes (2022)
Inquiry-Based Teaching	Encouragement of critical thinking and active student participation	Conceição & Silva (2024)
Natural Sciences Didactics	Collaborative strategies that unite science and social interaction	Rosse & Melim (2020)

Source: Bello, Capellini & Ribeiro (2018); Campos & Gomes (2022); Conceição & Silva (2024); Rosse & Melim (2020).

A significant aspect lies in approaches that combine research methods with collaborative learning. According to Conceição and Silva (2024), inquiry-based teaching strengthens students' critical thinking by encouraging them to formulate hypotheses, seek solutions, and consider diverse perspectives. In this regard, the reflective teacher is not merely a mediator but also a learner, sharing with students the intricate web that characterizes contemporary education. The continuous interplay between theory and practice enhances the teacher's ability to develop individuals capable of engaging in a plural and constantly evolving society.

Didactic strategies for teaching Natural Sciences exemplify how cooperative learning can be applied in concrete situations. According to Rosse and Melim (2020), the use of collaborative groups, combined with investigative strategies, results in a deeper understanding of scientific concepts and the enhancement of social skills. This connection demonstrates that the reflective teacher, by implementing collaborative practices, goes beyond the mere transmission of content, providing more engaging and meaningful learning experiences.

IV. DISCUSSION AND CONCLUSION

In summary, the final considerations demonstrate that the article precisely achieved each of the established objectives. The general objective, which was to analyze the interrelationships among ecopedagogy, emotional intelligence, and cooperative learning practices, was successfully attained by highlighting the importance of the reflective teacher in contemporary teacher education. Similarly, the specific objectives were also met, as the investigation revealed the role of ecopedagogy in fostering critical and sustainable practices, the significance of emotional intelligence in the development of educators' socio-emotional competencies, and the relevance of cooperative learning, linked to the reflective stance of the teacher, for promoting inclusive and participatory processes.

In Section 3.1, it was emphasized how ecopedagogy, drawing on authors such as Misiaszek (2020) and Pagani and Aguiar (2020), contributes to teacher education that is committed to critical sustainability. The discussions showed that educational practices grounded in ecological and social values not only prepare teachers to be more conscientious but also strengthen the role of schools as spaces for citizenship and social transformation. Therefore, ecopedagogy was presented as an opportunity for educators to reinterpret their role in light of the environmental crisis and the demands of contemporary society.

In Section 3.2, the investigation into emotional intelligence, based on the studies of Aldrup et al. (2020) and Justo and Andretta (2020), indicated that professional development for educators cannot disregard the enhancement of socio-emotional competencies. By cultivating self-management, empathy, and emotional awareness, teachers also strengthen interpersonal bonds and make the classroom a more harmonious and collaborative environment. This aspect was presented not as an appendix but as an integral part of pedagogical practice that underpins more respectful and productive relationships.

In Section 3.3, Campos and Gomes (2022) and Bello, Capellini, and Ribeiro (2018) argue that cooperative learning, combined with the teacher's critical reflection, fosters the development of more inclusive and dialogical pedagogical processes, in which students recognize themselves as active participants in knowledge construction.

Thus, the connection between ecopedagogy, emotional intelligence, and cooperative learning emerges as a promising pathway for the education of critical teachers capable of addressing the challenges of today's world. This combination of approaches reflects an educational practice that goes beyond the mere delivery of content and is directed toward the holistic development of citizens. For future research, it is suggested to examine how these three domains interconnect across diverse school contexts, considering factors such as educational policies, institutional conditions, and varying cultural realities. Comparative studies and practical experiences in different educational settings could deepen this discussion and provide concrete data for the implementation of innovative pedagogical practices.

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